



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,387	03/20/2001	Masayuki Miyazaki	500.39910x00	4078

20457 7590 03/11/2003

ANTONELLI TERRY STOUT AND KRAUS
SUITE 1800
1300 NORTH SEVENTEENTH STREET
ARLINGTON, VA 22209

EXAMINER

WELLS, KENNETH B

ART UNIT PAPER NUMBER

2816

DATE MAILED: 03/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/811,387

Applicant(s)

MIYAZAKI ET AL.

Examiner

Kenneth B. Wells

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 and 22 is/are allowed.
- 6) ☒ Claim(s) 17, 18, 20, 21, 23-25 and 27-35 is/are rejected.
- 7) ☒ Claim(s) 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2816

1. The amendment filed on 1/28/03 has been received and entered in the case.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 17,18, 20, 21, 23-25 and 27-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno et al.

This reference teaches changing the frequency of a clock signal supplied to first circuit of an IC in response to the first circuit changing its operating state (see, e.g., column 3, lines 45-50); and also changing the voltage applied to a substrate of the transistors of the first circuit in response to the first circuit changing its operating state (discussed throughout Mizuno as the change in the threshold voltage).

Not disclosed by Mizuno et al is changing the supply voltage in response to the first circuit changing its operating state, but such would have been obvious to those having ordinary skill in the art who know that it is common to lower the Vcc voltage when the IC has been idle for a while, and since Mizuno et al already teaches monitoring for such an idle condition (see, e.g., column 3, lines 45-50), the lowering of Vcc during an idle

Art Unit: 2816

condition does not represent a patentable distinction over Mizuno et al. The claims reciting the use of command signals from command decoders for controlling the clock frequency, the substrate bias and the level of the power supply voltage are also unpatentable because the use of such decoders for outputting any type of control signal is an old and well-known concept and those having ordinary skill in the art will know that such can be used to generate the (inherent) control signals needed to control the clock frequency, the substrate bias and the level of the power supply voltage.

Making the command decoder, second circuit or third circuit on a chip separate from the first circuit would have been obvious since this is also well-known in the art, for various advantages (e.g., being able to remove one circuit from a system and replacing it, while leaving the other circuits in place, a common technique in the art of semiconductor circuitry.

4. Claims 19 and 22 are allowed.

Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2816

5. Applicant's arguments filed on 1/28/03 have been fully considered but they are not persuasive.

The first argument is that Mizuno "fails to teach or suggest any such arrangement of initial values of all three characteristics of the frequency of the clock signal, the supply voltage and the substrate bias voltage based on predetermined combinations" (emphasis in original). This argument is without merit because it is improper in view of the fact that the rejection was made under 35 USC 103 (i.e., applicant is arguing as if the rejection was made under 102).

The next argument is that there is no suggestion in Mizuno as to how one would "incorporate of supply voltage in conjunction with controlling threshold voltage and operating speed." This argument is not persuasive because again the rejection is based on 35 USC 103, and, as pointed out in the rejection, the concept of lowering the supply voltage when the IC has been idle for a while is old and well-known in the art for the well-known purpose of power saving. As further noted in the office action, Mizuno teaches monitoring an idle state condition (column 3, lines 45-50) and those having ordinary skill in the art will easily recognize the advantage of lowering the Vcc supply voltage when the IC has been in an idle state for a relatively long time.

Art Unit: 2816

The next argument is that "finding a suitable combination of threshold voltage and supply voltage would require a very large amount of time." This argument is not persuasive because it appears to be a mere conclusory opinion, not based on any facts or evidence.

The next argument, at the top of page 17 of the 1/28/03 response, regarding the selection of "initial values" for the clock frequency, supply voltage and substrate bias voltage is not persuasive because such selection is considered to be within the level of ordinary skill in the art. As noted above, setting supply voltage, substrate bias voltage and clock speed relative to an operating state of an IC are all old and well-known concepts in the art, and optimizing these values beforehand does not constitute patentable distinction over what is already known in the art.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is

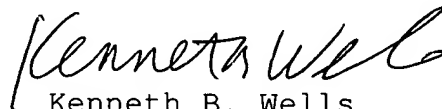
Art Unit: 2816

not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Wells whose telephone number is 703-308-4809. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan, can be reached at 703-308-4876. The fax phone numbers for TC2800 are 703-872-9318 (before final) and 703-872-9319 (after final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-308-0956.



Kenneth B. Wells
Primary Examiner
Art Unit 2816

March 10, 2003